

REMARKS

Claims 1, 2, 10, 12, and 16 are pending in this application. All of the pending claims are rejected. Claims 1, 2 and 10 are currently amended. Claim 6 is now cancelled. Reconsideration and further examination are respectfully requested.

As described in the Background at page 1, line 25 through page 2, line 8, dedicated lines and VPNs are the known techniques for providing connectivity between devices at different sites. Dedicated lines are typically more costly than VPNs. However, as described at page 2, lines 6-8 and 20-25, applying unique security relationships between every pair of member devices of different sites creates an N^2-1 scalability problem. The present inventions helps solve this problem by **applying the same security association to communications between any pair of members of a group**, e.g., VPN. In particular, the security association is applied on behalf of the group members by trusted ingress and egress devices at the edge of a backbone. The claims are currently amended in an attempt to more clearly express this feature.

The pending claims are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,701,437 (Hoke) in view of US 7,072,346 (Hama) in view of US 7,092,397 (Chandran). The examiner cites Hoke as showing devices which perform encryption on behalf of end stations. However, the examiner concedes that Hoke does not apply group security associations to communications between end stations and is not disposed at the edge of a backbone. The examiner therefore cites Hama as teaching an edge device receiving a packet including a group identifier at an edge device. However, the Examiner concedes that Hoke and Hama fail to suggest using a group identifier to identify a group security association which is applied to communications between any two members of a group. The examiner therefore cites Chandran at column 2, lines 1-8, which states:

then typically forwarded to another network, such as the Internet, via an edge router, for example. In the example above, **each ISP can be assigned a unique MPLS-VPN tag that identifies traffic belong [sic] to that ISP. The MPLS-VPN tag can then be used as a basis to apply security/QoS or any other defined policies on the traffic.** (emphasis added)

With respect, the examiner misconstrues the meaning of “traffic belong [sic] to that ISP.” As described by Chandran at column 1, lines 14-39, the context in which the cited passage must be read is that a cable modem in a household may be expected to support communications through different ISPs. As described at column 1, lines 56-65, the MPLS/VPN tag is applied before the CMTS, i.e., by the member device. Therefore, the passage cited by the examiner simply means that the cable modem and CMTS support different point-to-point security associations for each ISP. It does not mean that every subscriber of the ISP uses the same security association. As a consequence, the cited combination fails to solve the N^2-1 scalability problem. In other words, the cited combination fails to suggest “receiving a packet at the ingress point of the backbone **from any sending station of the group of stations**, the packet including an original header with a source IP address of the sending station and a destination IP address of a receiving station of the group of stations; transforming, at the ingress point of the backbone, the packet **by adding a group header including a group identifier corresponding to the group of stations** and a destination address for the packet; transforming, at the ingress point of the backbone, the packet **according to the group security association associated with the group identifier**,” as recited in claim 1. Claim 10 recites analogous limitations. Withdrawal of the rejections is therefore requested.

Claims 2, 12, 13 and 16 are dependent claims. If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d

1071, 5 USPQ2d 1596 (Fed. Cir. 1988). The dependent claims are therefore allowable for the same reasons stated above with regard to their respective base claims.

For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited. Should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Applicants' Attorney at the number listed below so that such issues may be resolved as expeditiously as possible.

Respectfully Submitted,

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Date

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